A-section

10 QUESTIONS * MIKE MCGINNIS; YOU KNOW HIM BECAUSE: HE'S THE EXECUTIVE DIRECTOR OF ODU'S VIRGINIA MODELING, ANALYSIS AND SIMULATION CENTER. A MISSION TO LEAD COMPUTER MODELING

By PETER DUJARDIN pdujardin@dailypress.com | 247-4749

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Mike McGinnis

SUFFOLK

Mike McGinnis left his teaching job at the U.S. Military Academy at West Point in June 2006 to take the reins at the Virginia Modeling, Analysis and Simulation Center.

The Suffolk center, an arm of Old Dominion University, is one of the focal points in Hampton Roads' efforts to establish itself as an important national player in modeling and simulation.

McGinnis, a retired Army colonel, sees big things in store for the industry here.

Q: For us lay people, give us a brief description of what exactly modeling and simulation is?

A: You take people, money, resources, equipment, you name it, whatever it takes for a process to work.

We put those in (to a computer model), the process works, and produces outputs.

It can produce a finished product, a smooth flow of equipment down a transportation route.

It could be sick people going in to a hospital, processes inside and healthy people coming out ... When they built Mount Rushmore, they built an exact small-scale model replica in the studio.

That allowed them to estimate how the real-world sculpture would work before they went in and blew away chunks of a mountain.

Q: What are some examples of technological advances that modeling and simulation already have been responsible for?

A: Many of our advances in medicine have come about as a result of doing simulations of how diseases spread, or modeling how an organ or joint works.

We can develop new medical techniques before we operate on human beings.

In Iraq today, we're using knowledge of IEDs (improvised explosive devices) to help train soldiers. That knowledge and awareness through the modeling and simulation helps save lives and prevents attacks.

Q: What are some technological advances modeling and simulation will give us in the future?

A: It's really unlimited. The past 25 years have been primarily driven by Department of Defense needs. In the years ahead, we will find modeling and simulation being used in our daily lives. ... It can unburden human beings

from making decisions on traffic, or making better decisions with investments. ...We have a transportation project that looks at the flow of goods into the Maersk terminal (in Portsmouth).

We're looking at 2,000-3,000 containers a day along the Western Freeway, and looking at alternatives for improving that flow. ... We have a three-way partnership between Virginia Tech, ODU, and the University of Virginia to model critical infrastructure -- transportation, communications, water, sewer, and power. If all your sewers all back up in a level three hurricane, you create a very unhealthy community.

Q: Is it true that Hampton Roads is challenging Orlando, Fla., as the national hub for modeling and simulation?

A: Are they stronger than us? Are we gaining ground on them? Both of those are true. We're gaining tremendous prominence nationally as a very strong region for modeling and simulation.

But Orlando has been around in modeling and simulation 20 to 25 years longer than we have, and has benefited greatly from investments by the state of Florida over the years. The Orlando area provides all the simulators to the Department of Defense, delivering those to whoever would use them. We in Hampton Roads help train soldiers and teams of soldiers (with the simulators developed in Orlando).

Orlando's focus is predominantly on defense, but here we're looking at medical, transportation, homeland security infrastructure and game-based learning.

Q: Are you glad you made the switch from West Point to VMASC?

A: I am tickled to death to be here. It's been a wonderful transition, and I have been welcomed with open arms. (ODU) President Roseann Runte and the university continue to do everything they can to make sure we move forward with modeling and simulation as an industry.

West Point is an incredibly beautiful place, the student body was great, but this is a new challenge for me and a new opportunity.

Q: What changes have you made since you've been here?

A: We have changed the way we're organized. We've written quite a number of policies that are very helpful, such as how do you request use of our laboratories, how do employees travel, how do we collaborate with other researchers.

Q: How big is the Virginia Modeling and Simulation Center, and what is your relationship with the U.S. Joint Forces Command, which also focuses on modeling and simulation in Suffolk?

A: VMASC has 23 faculty, 110 students, and another 13 technical and administration staff. We have cooperative research and development agreements with the Joint Forces Command and NASA. We have three contracts with the Joint Forces Command. We have student and faculty services, battle lab support, and technical services.

Q: Do you consider yourself a computer expert?

A: I know how to use computers, but I am not a computer expert. My keyboard wasn't working the other day, so my executive assistant said she bet the battery is run down on it.

And sure enough, the battery had run down on it. ... But we have computer and computational scientists who really get into the technology big time.

Q: What do you do in your spare time?

A: I like to fish, golf, ride my Harley. I ran the Shamrock Marathon in Virginia Beach. There are great running areas down here in Virginia with beautiful views.

My wife and I are going to get out on some of the rivers and kayak. Near where we live (in Chesapeake) we have a river walk and a little dock nearby.

Q: If you weren't here at VMASC, and you weren't at West Point, where do you imagine you'd be?

A: If it was up to my wife, we'd either be in Australia or Italy, hanging out. If it was up to me, we'd probably be back in the Black Hills (in South Dakota), trout fishing, playing golf and running trails. *

MIKE MCGINNIS

Retired U.S. Army colonel and a former head of the Systems Engineering Department at the U.S. Military Academy.

*Hobbies: Fishing, golfing, running and motorcycle riding.

* Education: A West Point graduate with a doctorate from the University of Arizona in systems and industrial engineering.

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